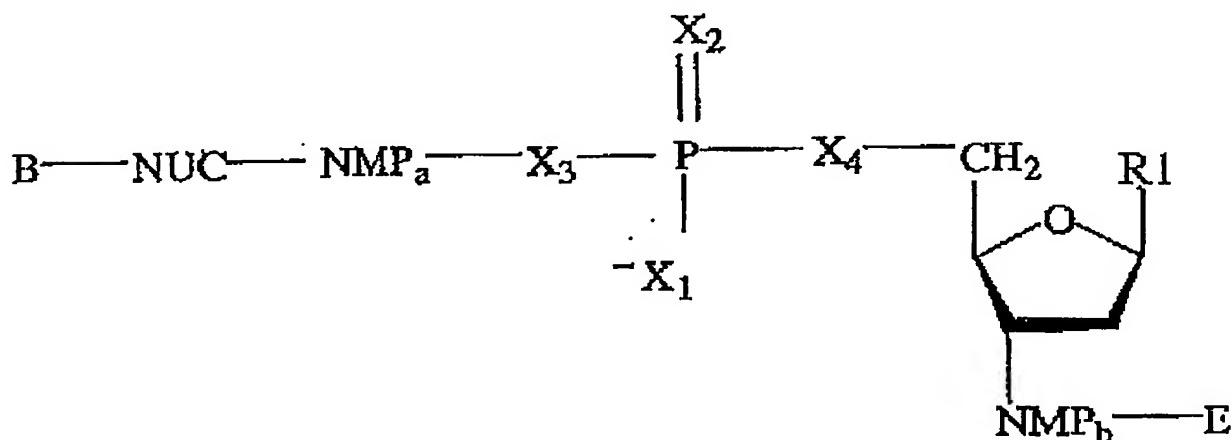


Claims:

1. Vaccine for preventing viral infections comprising
 - an antigen,
 - a peptide comprising a sequence $R_1-XZXZ_NXZX-R_2$, whereby N is a whole number between 3 and 7, preferably 5, X is a positively charged natural and/or non-natural amino acid residue, Z is an amino acid residue selected from the group consisting of L, V, I, F and/or W, and R_1 and R_2 are selected independantly one from the other from the group consisting of -H, -NH₂, -COCH₃, -COH, a peptide with up to 20 amino acid residues or a peptide reactive group or a peptide linker with or without a peptide; X- R_2 may be an amide, ester or thioester of the C-terminal amino acid residue of the peptide ("Peptide A"), and
 - an immunostimulatory oligodeoxynucleic acid molecule (ODN) having the structure according to the formula (I)



wherein

R1 is selected from hypoxanthine and uracile,
any X is O or S,
any NMP is a 2' deoxynucleoside monophosphate or
monothiophosphate, selected from the group consisting of
deoxyadenosine-, deoxyguanosine-, deoxyinosine-, deoxycytosine-,
deoxyuridine-,
deoxythymidine-, 2-methyl-deoxyinosine-, 5-methyl-deoxycytosine-
, deoxypseudouridine-, deoxyribosepurine-, 2-amino-
deoxyribosepurine-, 6-S-deoxyguanine-, 2-dimethyl-
deoxyguanosine- or N-isopentenyl-deoxyadenosine-monophosphate or
-monothiophosphate,
NUC is a 2' deoxynucleoside, selected from the group consisting
of deoxyadenosine-, deoxyguanosine-, deoxyinosine-,
deoxycytosine-, deoxyinosine-, deoxythymidine-, 2-methyl-
deoxyuridine-, 5-methyl-deoxycytosine-, deoxypseudouridine-,
deoxyribosepurine-, 2-amino-deoxyribosepurine-, 6-S-
deoxyguanine-, 2-dimethyl-deoxyguanosine- or N-isopentenyl-
deoxyadenosine,
a and b are integers from 0 to 100 with the proviso that a + b
is between 4 and 150, and
B and E are common groups for 5' or 3' ends of nucleic acid
molecules ("I-/U-ODN").

2. Vaccine according to claim 1, characterised in that it
further contains an Al(OH)₃ adjuvant.

3. Vaccine according to claim 1 or 2, characterised in that
said antigen is a viral antigen, preferably an influenza,
especially a haemagglutinin antigen or a neuraminidase antigen,
HCV or HBV, HIV, HPV or JEV antigen, a combined antigen or a
combination of one or more of these antigens.

4. Vaccine according to any one of claims 1 to 3, characterised
in that it further contains a polycationic peptide.

5. Vaccine according to any one of claims 1 to 4, characterised
in that said Peptide A is KLKL₅KLK and said I-/U-ODN is oligo
d(IC)₁₃.

6. Vaccine according to any one of claims 1 to 5, characterised in that it further contains an oligodeoxynucleotide containing a CpG-motif.

7. Vaccine according to any one of claims 1 to 6, characterised in that it further contains a polycationic peptide and an oligodeoxynucleotide containing a CpG-motif.

8. Use of a combination of Peptide A and a I-/U-ODN, both as defined in claim 1, to improve the protective efficacy of a vaccine against viral infection, especially against an infection with influenza virus, HBV, HCV, HPV, HIV or JEV.

9. Use of a combination of Peptide A and a I-/U-ODN, both as defined in claim 1, to improve the antigen-specific type 1 response, especially IgG2-antibody response or IFN-gamma response, of a vaccine against viral infections, especially infections with influenza virus, HBV, HCV, HIV, HPV or JEV, and at the same time preserving or preferably also increasing the type 2 response, especially IgG1-antibody response or interleukin 4 (IL 4) response, of said vaccine.